

### ABSTRACT OF THE DISCLOSURE

[0314]The present invention discloses a non-volatile semiconductor memory device and a method of operating the same. More specifically, the present invention includes a semiconductor substrate having active and field regions, at least two non-volatile storage transistors each of which having a storage on the active region and a control gate at the storage, wherein at least two control gates are incorporated into a single control plate, and at least two selection transistors each of which corresponds to the non-volatile storage transistor, wherein each of the selection transistors connected to the corresponding non-volatile storage transistors for selecting the corresponding non-volatile storage transistors.